Challenges in Educating New Onset Type 1 Diabetes Mellitus Patients: Can the Use of a Tablet be the Answer?

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Abstract

Background: Educating patients and families on the management of Type 1 Diabetes Mellitus (DM) has always been a challenge. Some endocrinologists educate patients and families with new onset Type 1 DM in the inpatient setting, while others have tried to do this process as an outpatient given the changes in the limits of inpatient coverage. Given the challenges in the education process, we must find new and innovative ways to educate patients and families efficiently so that they are equipped with the necessary skills to be successful in the management of Type 1 DM. In a world of smartphones and tablets as the mainstay of communication and sources of information, medical professionals can integrate these devices into the education of patients and families. Use of such a platform can make patients and families more independent in the education process of newly diagnosed Type 1 DM patients.

Methods: We will randomize new onset Type 1 DM diabetes patients, so that 50% will only receive the traditional diabetes education by nurses and the other 50% will receive the tablet and traditional diabetes education. For the patients and families who will receive the tablet, the tablet will contain an education system with modules that teach the various aspects of Type 1 DM care. Each module will have a pre-test to assess the user’s knowledge prior to viewing the modules. The modules have slides that models a lecture on the topic, as well as a video reviewing the topic. Following this, there is a post-test to assess the user’s knowledge.

Results: To study whether the use of a tablet platform as an adjunct in the education of patients and families with newly diagnosed Type 1 DM could lead to improved understanding of diabetes management, leading to better HbA1C improvement, less hypoglycemia and less phone calls to office.

Conclusions: Our hope is that the patients and families using the tablet platform will become more comfortable with the management of Type 1 DM, which will result in better HbA1C improvement, less hypoglycemia and less phone calls to office.

Objectives

To study whether the use of a tablet platform as an adjunct in the education of patients and families with newly diagnosed Type 1 DM could lead to improved understanding of diabetes management, leading to better HbA1C improvement, less hypoglycemia, as well as less phone calls to office.

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References

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Methods

- We randomized new onset Type 1 DM diabetes patients, so that 50% received traditional diabetes education by nurses and the other 50% received the tablet and traditional diabetes education.
- For the patients and families who received the tablet, the tablet contained an education system with modules that teach the various aspects of Type 1 DM care. Each module had a pre-test to assess the user’s knowledge prior to viewing the modules.
- The modules have slides that models a lecture on the topic, as well as a video reviewing the topic. Following this, there is a post-test to assess the user’s knowledge.
- We then compared patients and families who received the tablet versus those that do not.
- The follow-up measures that will be compared consists of improvement in HbA1C, incidence of hypoglycemia and phone calls to the office.
- We will also survey the patients and families about the tablet education process.

Results

On analysis of results, it showed that patients/families randomized to tablet education plus traditional education had less hypoglycemic episodes, but had the same amount of calls made to office. These patients also had a slightly higher average HbA1C as compared to patients randomized to just standard education. On survey of patients and families, they found that the use of the tablet was a helpful adjunct in their education.

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